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## UNITED STATES DEPARTMENT OF AGRICULTURE Bureau of Agricultural Economics Washington

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FOREIGN NEWS ON APPLES

THE CHINESE MARKET FOR AMERICAN APPLES

China is expected to afford a growing market for Pacific Coast apples as the Chinese come to appreciate the quality of the fruit, according to a report received in the Foreign Service of the Bureau of Agricultural Economics from Agricultural Commissioner Paul O. Nyhus. Purchasing power and transportation conditions are factors which at present restrict the market largely to the port cities. Keen competition is offered by poorer quality but lower priced native and Korean fruit, while Canada also offers competition to United States apples in the Shanghai market.

## Competition offered by Chinese fruit production

The market for United States apples in China is limited not only by the low purchasing power and poor transportation conditions but by the great abundance and variety of native fresh fruit in most parts of the country. Apple production in China is of minor importance compared to the crops of oranges, peaches, apricots, pears and some other fresh fruit, but domestic production takes care of a considerable part of the rather light requirements. At all the important railway stations vendors of tea, eggs, noodles, cigarettes and other items are joined by men, women and children selling whatever fruit is in season, according to Mr. Nyhus. Some variety of native fruit can be found on the markets throughout the entire year.

The volume of fruit production in China and the exact regions where it is grown are not known but some generalizations are possible. The Northeastern provinces of Shantung, Honan and Chihli are especially good fruit regions. Peaches, apricots and pears are grown in these provinces in large volume and the North China and Shanghai markets are well supplied. In general the native peaches, grown also in the lower Yangtsze and appearing on the market in May or June, are hard and flavorless. The native apricots which are available in June are especially good when picked reasonably ripe and secured in the producing sections and are also popular in the port cities.

There is a considerable trade in the native Chinese pear because of its excellent keeping quality. The Chinese distinguish between varieties grown in different localities, but in general they are small, hard and watery. They do not have much flavor but retain a certain crispness throughout the winter, similar to our best winter apples and are a refreshing fruit even in May. In addition to local consumption there is a big

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shipping movement from Tientsin to South China cities. Between 4,000 and 15,000 tons are shipped annually from Tientsin and a few other North China ports and are absorbed by Shanghai and South China cities.

A few Bartlett pears of fine texture and flavor are produced at Chefoo in Shantung province and in southern Manchuria but the difficulty involved in shipping such a perishable fruit with such inadequate transportation facilities restricts the market for this variety of pear largely to railway zones in Manchuria. A few get to Shanghai and are available for a short period of the season.

Excellent white and purple grapes are grown at Chefoo and north of Tientsin and although largely sold in North China are also shipped to Shanghai. The North China persimmon is a delicious fruit, especially popular in the North and available also in the fruit stores of Shanghai. Melons and gourds of a great variety are grown in abundance and small sized varieties are on the market throughout most of the year.

The cities of China are supplied with a small sized banana from the Canton district in South China. These come on the market in May and the volume of shipments between Chinese ports is only exceeded by shipments of native oranges. Plums and lichees are among other fresh fruits that together make up a domestic fruit trade which must be carefully considered in studying the market for imported fruit.

Growing areas for apples are restricted to localities in Northern China and Marchuria. The native apple of China is a very inferior fruit, tasteless and cottony in texture and it is only with the production of foreign varieties that a significant commerce in apples has developed. The production of foreign varieties centers largely in Chefoo and Southern Manchuria and the adjacent Japanese colony of Korea and it is with this production that the United States apple must compete.

## The Chefoo fruit industry

Chefoo is widely known in China as a commercial fruit region. It is a small port on the North coast of the Shantung Peninsula and is known to some extent in America as the summer camp of the American Asiatic fleet. Climatic conditions along the mountainous coast about Chefoo seem to be more favorable to fruit production than in other regions in North China and an industry using American varieties of apples, pears and grapes has developed into commercial significance. Trials made with American varieties in North China in districts other than Chefoo have experienced more or less winter and spring killing ascribed to extremely dry weather and dust storms of the spring months. The dry winds are from the interior of Asia to the Northwest and it is possible that the location of Chefoo on the Peninsula, whereby the Northwest winds gather humidity in blowing over the Gulf of Chihli, is the explanation of the success of fruit growing near Chefoo.

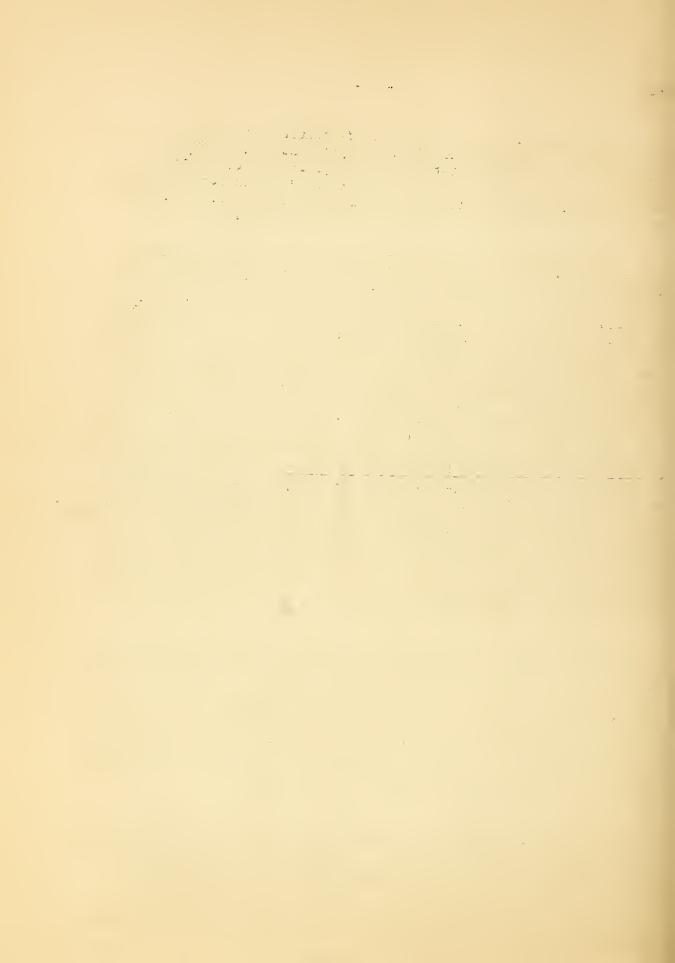
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The beginning of the foreign fruit industry of Chefoo is believed to date back to 1861 when Dr. John Livingston Nevius, an American Missionary from New York state tested out grafts of scions from American varieties of fruit. The "Foreign Fruit Garden" was an object of interest among the Chinese at the time but its example did not bring about a commercial production until some twenty or thirty years later.

Customs statistics for Chefoo indicate that the present annual fresh fruit exports of the district are about 8,000 short tons. These shipments are not classified as to kinds of fruit but various data indicate that about 60 per cent are apples and the balance is made up of apricots, peaches, grapes, pears, plums and cherries in the order given. The leading markets are Shanghai, Tientsin and Dairen. Mr. A. G. Sweeney, former American consul at Chefoo, has observed in a report on the Chefoo fruit industry that fruit from the coast district is assembled at Chefoo either by Chinese boats called junks or by overland route and that the maximum distance that fruit can profitably be carried over land by coolie carriers or pack animals is thirty miles. In an interview with Mr. Nyhus one of the pioneers in the production of foreign fruit varieties in Chefoc stated that foreign apple varieties have been most successful commercially. Most of the apples are fall varieties marketed by the farmers in August and September at prices equivalent to \$1.00 to \$1.50 per hundred pounds. The grower interviewed, however, stated that he sold annually some two to three thousand boxes of ten pounds each of good winter apples at 75 cents per box. He sells large quantities of selected apples in November and December and ships out from one to two thousand baskets of fifty pounds each, of fresh fruit on each boat for other Chinese ports at that season. The bulk of the Chefoo and Manchurian apples is marketed early, however, and although a distinct improvement over native apples, do not compare in quality with United States and Canadian apples and are not good keepers.

The same interview brought out other interesting facts concerning the industry. It has spread some thirty miles along the coast from Chefco and fruit trees now cover the hillsides where formerly the Chinese merely grew firs for fuel. One of the new developments lies in the use of the hillsides instead of the flats for orchards and vineyards. Worms and diseases are big problems in the industry as spraying is not general and coolies and boys hired to pick off worms do not get all of the trouble makers. The Chinese are skillful at grafting scions of foreign varieties on stocks of a hardy native crab-apple but in setting out trees they often place them too close together, only 6 to 8 feet apart.

Apricots and peaches grown in Chefoo are of native varieties. A few Bartlett pears are grown in the large orchards but they are too perishable for most of the farmers to handle. American and native varieties of plums are grown to only a limited extent because of the difficulty in shipping the fruit in good condition. There are some American grapes in most vineyards and some Austrian grapes have been used for wine but are less hardy than the native grape which will more easily stand the shipment to Shanghai and North China cities.



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### Domestic supplies other than Cheroo of foreign apple varieties

Additional domestic supplies of foreign varieties of apples and other fruit are furnished by South Manchuria where the industry has been stimulated by the example of the Japanese in the leased territory of Kwantung. Production in this region is absorbed largely in Manchuria at the present time but shipments to Tientsin and Shanghai are becoming significant.

Apples imported from Korea are considered in customs statistics as foreign production but the position of Korea just across a river from Manchuria gives this supply practically the same character as domestic production. Korean apples are shipped across the border in large quantities to supplement the receipts from Chefoo and form an important addition to the Chinese domestic supply. Japanese administration in Korea has brought important development and scientific assistance in horticultural work and conditions in Korea are said to be very favorable for apples so that the industry is increasing yearly.

#### Import trade in apples

American and Canadian apples are consumed chiefly in the port cities of China and the largest single market is Shanghai. This is due to the concentration of foreigners and wealthy Chinese in that city who are able to enjoy luxuries not possible to the masses. Fully three-fourths of the American and Canadian apples imported into China are consumed in Shanghai districts, while varying amounts of 10 to 20 per cent of the imports are reexported in small lots to other port cities. Direct imports to ports other than Shanghai are very small. The total quantity of Chinese apple imports together with their value in United States dollars for the years 1925 and 1926 are given below:

APPLES: Total imports into China 1925 and 1926, by sources

	:		1925		:		1926			
	•		Valu	le	•	:_	Va .	lue		
Country	Quantity		Total	:Av per	Quanti ty		Total	:Av per : box		
	: Boxes	:	Dollars			:	Dollars	: <u>D</u>	ollars	
Russian Pacific	:	:		:	*	:		:		
ports <u>a</u> /	: 15,700	:	55,700	: 3.55	: 6,800	:	20,400	;	3.00	
Canada	: 9,300	:	28,700	: 3.09	: 10,200		29,100	;	2.85	
Japan		:	32,200	: 1.96	: 30,000	:	55,600	:	1.85	
United States	: 31,800	:	90,400	: 2.84	: 58,000	:	155,700	:	2.68	
Korea	: 65,900	:	149,200	: 2.26	: 115,200	:	281,600	:	2.44	
Total imports	*	:		:	8 0	0		;		
from abroad	: 140,900	4	357,000	: 2.53	: 220,500		544,000	:	2.47	
a/ Probably composed largely of reexports from other countries.										

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Net imports of apples into Shanghai are not available but the following table on gross imports gives some idea of the kinds and relative quantities on the Shanghai market:

APPLES: Imports into Shanghai by sources, 1924-1927
In hoves of 44 pounds

Year :	Native (mostly from Chefoo)	United	xes 01 44 : Canada		: Korea	: Total
:	Boxes	Boxes	Boxes	Boxes	Boxes	Boxes
1924: 1925: 1926:	1.51 600	29,800 57,000	7,500 9,300 10,000 12,700	: 1,400	: 700	•
:		•	:	:	:	<u> </u>

Source: Unpublished records of the Chinese Maritime Customs.

These figures indicate that 65 to 80 per cent of the Shanghai imports are native apples. These begin to arrive as early as July and throughout the fall months are sold at low prices. Early California apples arrive in September and are followed by Washington and Oregon varieties. The largest sales are made from November to March, but they continue to be on the market until June and July. The Chinese prefer red Winesaps in relatively small sizes but Newtowns of larger sizes are also popular. American apples sell at prices from 25 to 35 per cent above those for Korean fruit. For eating purposes American and Canadian apples have no equal in China but Shanghai and other Chinese ports do not offer discriminating apple markets and some education in this respect is required to expand the market for American fruit.

Data are not available on the imports of Chefoo apples into Tientsin but importers state that the amount is considerable. Tientsin and Peking have foreign communities of some size which are important factors in the sale of Western apples. Conditions for keeping and displaying perishable fruit in good condition do not exist as they do in Shanghai, however, and the trade in American and Canadian apples is a more or less stationary one of about 2,000 boxes annually. Imports from Korea and Japan are on the increase, however, and in 1927 amounted to 5,700 and 2,700 boxes respectively.

The demand for apples in Manchuria is supplied not only by fruit grown in the district but by imports from Chefoo, Korea and Japan. Most of the exports from Japan to China are sent to Manchuria. Apple production in Japan is largely confined to the mountainsides of the Northern prefecture of Aomori and the Northern island of Hokkaido, since other regions of Japan are too warm and moist for successful apple cultivation. Annual production at Aomori is approximately 3,400,000 boxes and is entirely of varieties imported from America, reports Mr. Nyhos. Nost of the fruit is shipped to the cities of Japan but a small amount is exported to Manchuria and China. Jonathan and Rawls Janet are popular winter varieties.

Imports of apples into Manchuria by scurces are given in the following table:

APPLES: Imports into Manchuria, 1924-1926

	In boxes of 44 pounds									
	Year	Chefoo (China)	:	Korea	:	Japan	:	United States	:	Total
	:	Boxes	:	Boxes	:	Boxes	:	Boxes	:	Boxes
	:		:				:		:	
192	24:	45,500	;	52,300	:	3,600	;	100	:	102,300
192	25:	54,500	:	66,600	;	23,900	:	100	:	145,500
192	26:	48,400	;	112,100	*	25,700	:	100	:	186,400
	:		;		:		:		:	

Source: Unpublished records of the Chinese Maritime Customs and estimates based thereon.

Morean and Japanese apples are fairly attractive and leave small place in the Manchurian market for American apples. Large red Korean fruit was on display at Harbin for  $4\frac{1}{2}$  cents per piece. Transportation facilities also make imports into Manchuria difficult. Fruit must be shipped before the extremely cold weather sets in since direct shipments from Shanghai are sometimes damaged by freezing.

The market is thus very regional in character, only small amounts being shipped to ports other than those treated above. The ocean rate from Seattle to Shanghai, as reported by Mr. Nyhus, is \$.625 per box for ventilated storage and the import duty 60 cents per 100 pounds.

A discussion of the Chinese market for American oranges and lemons was published in Foreign Service release, CF-57, which may be obtained on application to the Foreign Service of the Bureau of Agricultural Economics.

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